LABORATORY INSPECTION INFORMATION REQUEST

This information will assist in the processing of laboratory inspections. The inspection is a two-man day comprehensive review that includes review of the quality system, verification of test equipment, and observation of test procedures performed. Please complete and return to:

Commander
U.S. Army Engineer Research and Development Center
ATTN: Mr. James B. Warriner, CEERD-GS-E **Phone: (601) 634-3610**
3909 Halls Ferry Road **Fax: (601) 634-4656**
Vicksburg, MS 39180-6199 **E-mail: James.B.Warriner@erdc.usace.army.mil**

GENERAL LABORATORY INFORMATION

Date of Request:_____E-Mail Address:_____

Laboratory Name:_____

Laboratory Location:_____

_____

Telephone Number: (____)_____FAX Number: (____)_____

Mailing Address:_____

_____

Name and Title of Point of Contact:_____

AREA OF INSPECTION DESIRED: Please check the appropriate areas for which this inspection is requested and complete the questionnaire below.

Aggregates ____ **Bituminous** ____ **Concrete** ____ **Masonry** ____ **Rock** ____ **Soil** ____

LABORATORY QUALITY ASSURANCE QUESTIONNAIRE
(ASTM C 1077-02, C 1093-95 (01), D 3666-01, D 3740-01, E 329-01)

Quality System	Yes	No	**Accreditation Programs (if Yes, list date)**	Yes	No
Quality Manual			AASHTO Accreditation Program (includes AMRL and CCRL)		
Proficiency Sample Programs: Aggregate			American Association for Laboratory Accreditation (A2LA)		
Bituminous			National Voluntary Laboratory Accreditation Program (NVLAP)		
Concrete			Concrete Materials Engineering Council (CMEC)		
Masonry					
Soil			**Inspections (if Yes, list date)**		
Certified Technicians (if Yes, list number)			AASHTO Materials Reference Laboratory (AMRL)		
American Concrete Institute (ACI)			Cement and Concrete Reference Laboratory (CCRL)		
National Institute for Certification in Engineering Technologies (NICET)			US Army Corps of Engineers		

U.S. Army Corps of Engineers Information

District Contact:_____Telephone: (____)_____

NOTE: The U.S. Army Corps of Engineers Materials Testing Center (MTC) does not certify nor does it provide any accreditation to laboratories. The MTC conducts inspections to validate the capability of a laboratory to perform specific tests as required by contract with the U.S. Army Corps of Engineers.

Revised: 03 Nov2003

Aggregate Inspection Checklist

Please mark the test methods to be validated during this inspection to include the laboratory's full capabilities. Mark the last column if a test method has been previously inspected by AMRL or CCRL within the past two years.
If a test method is not listed, add your required test method at the bottom of the checklist:

Test Method	Test Procedure	No.	Check	AMRL/CCR
	REQUIRED TESTS PER ASTM C1077-03			**Inspection**
ASTM C 40-99	Organic Impurities	A1		
ASTM C 117-03	Material Finer than 75 :m (No. 200) Sieve	A2		
ASTM C 127-01	Specific Gravity & Absorption in Coarse Aggregate	A3		
ASTM C 128-01	Specific Gravity & Absorption in Fine Aggregate	A4		
ASTM C 136-01	Sieve Analysis of Aggregates	A5		
	OPTIONAL TESTS PER ASTM C1077-03			
ASTM C 29-97 (03)	Unit Weight and Voids in Aggregate	A6		
ASTM C 70-94 (01)	Surface Moisture in Fine Aggregate	A7		
ASTM C 87-03	Effects of Organic Impurities on Mortar Strength	A8		
ASTM C 88-99	Sulfate Soundness	A9		
ASTM C 123-03	Lightweight Particles	A10		
ASTM C 131-03	Los Angeles Abrasion Resistance on Small-Size Coarse Aggregate	A11		
ASTM C 142-97	Clay Lumps	A12		
ASTM C 227-03	Alkali Reactivity of Cement-Aggregate Combinations (Mortar-Bar)	A13		
ASTM C 289-03	Alkali-Silica Reactivity of Aggregates (Chemical Method)	A14		
ASTM C 295-03	Petrographic Examination	A15		
ASTM C 441-02	Effectiveness of Mineral Admixtures or GBFS on Preventing	A16		
ASTM C 535-03	Los Angeles Abrasion Resistance on Large Size Coarse Aggregate	A11		
ASTM C 566-97	Total Moisture Content	A17		
ASTM C 586-99	Alkali Reactivity of Carbonate Rocks (Rock Cylinder Method)	A18		
ASTM C 641-98	Staining Materials in Lightweight Aggregates	A19		
ASTM C 682-94	Frost Resistance by Critical Dilation Procedure	A20		
ASTM C 702-98 (03)	Reducing Samples to Testing Size	A21		
ASTM C 1105-95 (02)	Length Change Due to Alkali-Carbonate Reaction	A22		
ASTM C 1137-97	Degradation of Fine Aggregate due to Attrition	A23		
ASTM C 1138-97	Abrasion Resistance of Concrete (Underwater Method)	A24		
ASTM C 1252-03	Uncompacted Void Content	A25		
ASTM C 1260-01	Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)	A26		
ASTM C 1293-01	Length Change Alkali-Silica Reaction	A27		
ASTM D 75-03	Sampling	A28		
ASTM D 546-99	Sieve Analysis of Mineral Filler	A29		
ASTM D 2419-02	Sand Equivalent Value	A30		
ASTM D 3744-03	Aggregate Durability Index	A31		
ASTM D 4791-99	Flat or Elongated Particles	A32		
ASTM D 5821-01	Percentage of Fractured Particles in Coarse Aggregate	A33		
CRD-C 104-80	Fineness Modulus	A5		
CRD-C 119-91	Flat and Elongated Particles	A32		
CRD-C 130-89	Scratch Hardness	A34		
CRD-C 171-94	Percentage of Crushed Particles in Aggregate	A35		

Bituminous Inspection Checklist

Please mark the test methods to be validated during this inspection to include the laboratory's full capabilities. Mark the last column if a test method has been previously inspected by AMRL within the past two years.
If a test method is not listed, add your required test method at the bottom of the checklist:

Test Method	Test Procedure (ASTM D 3666-03)	No.	Check	AMRL Inspection
ASTM D 5-97	Penetration	B1		
ASTM D 36-95 (00)	Softening Point	B2		
ASTM D 70-03	Specific Gravity & Density	B3		
ASTM D 113-99	Ductility	B4		
ASTM D 139-95 (01)	Float Test	B5		
ASTM D 140-01	Sampling Bituminous Materials	B6		
ASTM D 242-95 (00)	Mineral Filler for Bituminous Paving Mixtures	B7		
ASTM D 243-02	Penetration Residue	B8		
ASTM D 244-00	Emulsified Asphalts	B9		
ASTM D 402-02	Distillation of Cut-Back Asphalts	B10		
ASTM D 1074-02	Compressive Strength	B11		
ASTM D 1075-96	Effect of Water on Compressive Strength	B12		
ASTM D 1188-96	Bulk Specific Gravity & Density Using Coated Samples	B13		
ASTM D 1461-85	Moisture or Volatile Distillates in Bituminous Paving Mixtures	B14		
ASTM D 1559-89	Resistance of Plastic Flow by Marshall	B15		
ASTM D 1560-92	Resistance to Deformation & Cohesion by Hveem	B16		
ASTM D 1561-92	Preparation by CA Kneading Compactor	B17		
ASTM D 1754-97	Effect of Heat & Air by Thin Film Oven	B18		
ASTM D 1856-95	Recovery of Asphalt by Abson	B19		
ASTM D 2041-00	Theoretical Maximum Specific Gravity & Density (Rice)	B20		
ASTM D 2042-01	Solubility by Trichloroethylene	B21		
ASTM D 2170-01	Kinematic Viscosity	B22		
ASTM D 2171-01	Viscosity by Vacuum Capillary Viscometer	B23		
ASTM D 2172-01	Quantitative Extraction	B24		
ASTM D 2726-00	Bulk Specific Gravity and Density	B25		
ASTM D 2872-97	Effect of Heat & Air on Moving Film by Rolling Thin Film Oven	B26		
ASTM D 2950-91	Density of Bituminous Concrete in Place by Nuclear Methods	B27		
ASTM D 3142-97	Density of Liquid Asphalts by Hydrometer	B28		
ASTM D 3203-94	Percent Air Voids	B29		
ASTM D 3289-03	Density by Nickel Crucible	B30		
ASTM D 4125-94	Asphalt Content by Nuclear Method	B31		
ASTM D 4867-96	Effect of Moisture	B32		
ASTM D 5404-03	Asphalt Recovery by Rotary Evaporator	B33		
ASTM D 5444-98	Mechanical Size Analysis of Extracted Aggregate	B34		
ASTM D 6307-98	Asphalt Content of Hot-Mix Asphalt by Ignition Method	B35		
CRD-C 649-95	Unit Weight, Marshall Stability, and Flow of Bituminous	B15		
CRD-C 650-95	Density and Percent Voids	B36		

Concrete Inspection Checklist

Please mark the test methods to be validated during this inspection to include the laboratory's full capabilities. Mark the last column if a test method has been previously inspected by CCRL within the past two years.
If a test method is not listed, add your required test method at the bottom of the checklist:

Test Method	Test Procedure	No.	Check	CCRL
	REQUIRED TESTS PER ASTM C1077-03			**Inspection**
ASTM C 31-03	Making and Curing Test Specimens in the Field	C1		
ASTM C 39-03	Compressive Strength of Cylindrical Specimens	C2		
ASTM C 138-01	Unit Weight and Air Content by Gravimetric	C3		
ASTM C 143-03	Slump	C4		
ASTM C 172-99	Sampling	C5		
ASTM C 173-01	Air Content by Volumetric ***required if C231 not performed***	C6		
ASTM C 231-03	Air Content by Pressure ***required if C173 not performed***	C7		
ASTM C 1064-03	Temperature of Concrete	C8		
	OPTIONAL TESTS PER ASTM C1077-03			
ASTM C 42-03	Drilled Cores and Sawed Beams	C9		
ASTM C 78-02	Flexural Strength by Third Point Loading	C10		
ASTM C 116-90	Compressive Strength of Broken Beams	C11		
ASTM C 157-03	Length Change of Concrete and Mortars	C12		
ASTM C 174-97	Concrete Thickness by Drilled Cores	C13		
ASTM C 192-02	Making and Curing Test Specimens in Laboratory	C14		
ASTM C 215-02	Fundamental Frequencies of Concrete	C15		
ASTM C 232-99	Bleeding of Concrete	C16		
ASTM C 234-91	Comparing Concrete by Reinforcing Steel Bond	C17		
ASTM C 293-02	Flexural Strength by Center Point Loading	C18		
ASTM C 305-99	Mechanical Mixing of Hydraulic-Cement Pastes & Mortars	C19		
ASTM C 341-03	Length Change of Drilled or Sawed Concrete	C20		
ASTM C 360-92	Ball Penetration	C21		
ASTM C 403-99	Time of Setting by Penetration Resistance	C22		
ASTM C 418-98	Abrasion Resistance by Sand Blasting	C23		
ASTM C 457-98	Air-Void System by Microscopic Determination	C24		
ASTM C 469-94	Static Modulus of Elasticity and Poisson's Ratio	C25		
ASTM C 470-02	Molds for Forming Concrete Test Cylinders Vertically	C26		
ASTM C 490-00	Apparatus for Length Change of Cement Paste, Mortar, & Concrete	C27		
ASTM C 495-99	Compressive Strength of Lightweight Insulating Concrete	C28		
ASTM C 496-96	Splitting Tensile Strength	C29		
ASTM C 511-03	Moist Cabinets, Moist Rooms, Water Storage Tanks	C30		
ASTM C 512-87 (94)	Creep of Concrete in Compression	C31		
ASTM C 567-00	Unit Mass of Structural Lightweight Concrete	C32		
ASTM C 597-02	Pulse Velocity Through Concrete	C33		
ASTM C 617-98	Capping Cylindrical Specimens	C34		
ASTM C 642-97	Density, Absorption, and Voids	C35		
ASTM C 666-03	Freezing & Thawing Concrete Specimens	C36		
ASTM C 671-94	Critical Dilation of Concrete by Freezing	C37		

Concrete Inspection Checklist Continued

Please mark the test methods to be validated during this inspection to include the laboratory's full capabilities. Mark the last column if a test method has been previously inspected by CCRL within the past two years.
If a test method is not listed, add your required test method at the bottom of the checklist:

Test Method	Test Procedure (ASTM C 1077-03)	No.	Check	CCRL Inspection
ASTM C 672-98	Scaling Resistance by Deicing Chemicals	C38		
ASTM C 684-99	Accelerated Curing & Testing	C39		
ASTM C 779-00	Abrasion Resistance of Horizontal Surfaces	C40		
ASTM C 801-98	Triaxial Loading of Concrete	C41		
ASTM C 803-03	Penetration Resistance of Hardened Concrete	C42		
ASTM C 805-02	Rebound Number of Hardened Concrete	C43		
ASTM C 823-00	Examination and Sampling Hardened Concrete in Construction	C44		
ASTM C 856-02	Petrographic Examination of Hardened Concrete	C45		
ASTM C 873-99	Compressive Strength of Cast in Place Cylinders	C46		
ASTM C 876-91 (99)	Half-Cell Potentials of Uncoated Reinforcing Steel	C47		
ASTM C 900-01	Concrete Pullout Strength	C48		
ASTM C 918-02	Early Age Compression Test	C49		
ASTM C 944-99	Abrasion Resistance by Rotating-Cutter Method	C50		
ASTM C 1040-93 (00)	Density of Concrete by Nuclear Method	C51		
ASTM C 1074-98	Estimating Concrete Strength by Maturity Method	C52		
ASTM C 1078-87 (92)	Cement Content of Freshly Mixed Concrete	C53		
ASTM C 1079-87 (92)	Water Content of Freshly Mixed Concrete	C54		
ASTM C 1084-02	Portland Cement Content of Hardened Concrete	C55		
ASTM C 1150-96	Break-Off Number of Concrete	C56		
ASTM C 1152-97	Acid-Soluble Chloride in Concrete	C57		
ASTM C 1202-97	Electrical Indication of Concrete to Resist Chloride Ion	C58		
ASTM C 1218-99	Water-Soluble Chloride in Concrete	C59		
ASTM C 1231-2000	Unbonded Caps	C60		
CRD-C 114-97	Soundness by Freezing and Thawing of Concrete	C61		

What is the capacity of the compression testing machine(s)?_____

How many ranges are associated with the test machine(s)?_____

Masonry Inspection Checklist

Please mark the test methods to be validated during this inspection to include the laboratory's full capabilities. Mark the last column if a test method has been previously inspected by AMRL or CCRL within the past two years.
If a test method is not listed, add your required test method at the bottom of the checklist:

Test Method	Test Procedure (ASTM C 1093-95 (01)	No.	Check	CCRL Inspection
ASTM C 90-03	Loadbearing Concrete Masonry Units	M1		
ASTM C 91-03	Masonry Cement	M2		
ASTM C 109-02	Compressive Strength of Cement Mortars Using Cube Specimens	M3		
ASTM C 140-02	Sampling and Testing Concrete Masonry and Related Units	M4		
ASTM C 151-00	Autoclave Expansion of Portland Cement	M5		
ASTM C 185-02	Air Content of Hydraulic Cement Mortar	M6		
ASTM C 187-98	Normal Consistency of Hydraulic Cement	M7		
ASTM C 266-99	Time of Setting of Hydraulic-Cement Paste by Gillmore Needles	M8		
ASTM C 305-99	Mechanical Mixing of Cement Pastes & Mortars of Plastic Consistency	M9		
ASTM C 780-02	Evaluation of Mortars for Plain and Reinforced Unit Masonry	M10		
ASTM C 1019-03	Sampling and Testing Grout	M11		

Rock Inspection Checklist

Please mark the test methods to be validated during this inspection to include the laboratory's full capabilities. Mark the last column if a test method has been previously inspected by AMRL or CCRL within the past two years.
If a test method is not listed, add your required test method at the bottom of the checklist:

Test Method	Test Procedure (ASTM D 3740-01)	No.	Check	AMRL/CCRL Inspection
ASTM D 2664-95	Triaxial Compressive Strength, Undrained w/o Pore Pressures	R1		
ASTM D 2845-00	Pulse Velocity and Ultrasonic Elastic Constants	R2		
ASTM D 2936-95 (01)	Direct Tensile Strength of Intact Rock Core	R3		
ASTM D 2938-95	Unconfined Compressive Strength	R4		
ASTM D 3148-02	Modulus of Elasticity (Static) in Uniaxial Compression	R5		
ASTM D 3967-95 (01)	Tensile Strength, Splitting (Brazilian) Method	R6		
ASTM D 4435-84 (98)	Rock Bolt Anchor Pull Test	R7		
ASTM D 4543-01	Preparing Rock Core Specimens and Determining Tolerances	R8		
ASTM D 4644-87 (98)	Slake Durability of Shales and Weak Rocks	R9		
ASTM D 5312-92 (97)	Durability of Rock to Freezing and Thawing	R10		
ASTM D 5313-92 (97)	Durability of Rock to Wetting and Drying	R11		
ASTM D 5607-02	Laboratory direct Shear Tests on Rock Under Constant Normal	R12		
ASTM D 5731-95	Point Load Index	R13		
ASTM D 5878-00	Rock-Mass Classification for Engineering Purposes	R14		
CRD-C 144-92	Resistance of Rock to Freezing and Thawing	R10		
CRD-C 148-69	Expansive Breakdown on Soaking in Ethylene Glycol	R15		
CRD-C 169-97	Resistance of Rock to Wetting and Drying	R11		

Soils Inspection Checklist

Please mark the test methods to be validated during this inspection to include the laboratory's full capabilities. Mark the last column if a test method has been previously inspected by AMRL within the past two years.
If a test method is not listed, add your required test method at the bottom of the checklist:

Test Method	Test Procedure (ASTM D 3740-03)	No.	Check	AMRL Inspection
ASTM D 421-85 (98)	Dry Preparation for Particle Size Distribution & Soil Constants	S1		
ASTM D 422-63 (98)	Particle Size Analysis	S2		
ASTM D 427-98	Shrinkage Factor	S3		
ASTM D 558-96	Moisture-Density of Soil-Cement	S4		
ASTM D 559-96	Wetting & Drying Soil-Cement	S5		
ASTM D 560-96	Freezing & Thawing Soil-Cement	S6		
ASTM D 698-00	Compaction Characteristics by Standard Effort	S7		
ASTM D 854-02	Specific Gravity of Soils	S8		
ASTM D 1140-00	Material Finer than 75 µm (No. 200) Sieve	S9		
ASTM D 1556-00	Density & Unit Weight by Sand Cone	S10		
ASTM D 1557-00	Compaction Characteristics by Modified Effort	S11		
ASTM D 1883-99	CA Bearing Ratio (CBR)	S12		
ASTM D 2166-00	Unconfined Compressive Strength	S13		
ASTM D 2167-94 (01)	Density & Unit Weight by Rubber Balloon	S14		
ASTM D 2168-02	Calibration of Laboratory Mechanical-Rammer Soil Compactors	S15		
ASTM D 2216-98	Water Content	S16		
ASTM D 2217-85 (98)	Wet Preparation for Particle Size Analysis	S17		
ASTM D 2434-68 (00)	Permeability by Constant Head	S18		
ASTM D 2435-96	One-Dimensional Consolidation Properties	S19		
ASTM D 2487-00	Classification of Soils	S20		
ASTM D 2488-00	Description & Identification of Soils (Visual-Manual Procedure)	S21		
ASTM D 2850-95 (99)	Unconsolidated, Undrained Strength in Triaxial Compression	S22		
ASTM D 2922-01	Density by Shallow Depth Nuclear Method	S23		
ASTM D 2937-00	Density by Drive Cylinder Method	S24		
ASTM D 3017-01	Moisture Content by Shallow Depth Nuclear Method	S25		
ASTM D 3080-98	Direct Shear Test in Consolidated Drained Conditions	S26		
ASTM D 4220-95 (00)	Preserving & Transporting Samples	S27		
ASTM D 4253-00	Maximum Index Density by Vibratory Table	S28		
ASTM D 4254-00	Minimum Index Density	S29		
ASTM D 4318-00	Liquid & Plastic Limits & Plasticity Index	S30		
ASTM D 4546-96	One-Dimensional Swell or Settlement Potential	S31		
ASTM D 4564-02	Density by Sleeve Method	S32		
ASTM D 4643-00	Determination of Water Content of Soil by Microwave Oven	S33		
ASTM D 4767-95	Consolidated-Undrained Triaxial Compression	S34		
ASTM D 5084-00	Hydraulic Conductivity using a Flexible Wall Permeameter	S35		